Minor
OPERATION AND MAINTENANCE
Activity Plan

232-H SINKOLE REPAIR

Prepared by: TAYLOR STOW (Affiliate) Digitally signed by TAYLOR STOW (Affiliate) Date: 2021.11.03 09:14:29 -04'00'

Taylor M. Stow
Environmental Compliance Authority
SRTE

Date

Approved by: GEORGE ALEXANDER (Affiliate) Digitally signed by GEORGE ALEXANDER (Affiliate) Date: 2021.11.03 09:33:34 -04'00'

Jack Alexander
Environmental & Waste Management Compliance
Manager, SRTE

Date

Approved by: TIMOTHY LINDER (Affiliate) Digitally signed by TIMOTHY LINDER (Affiliate) Date: 2021.11.03 10:38:43 -04'00'

Tim Linder
Outside Facilities Manager
SRTE

Date

Approved by: Ruby James Parks Digitally signed by Ruby James Parks Date: 2021.11.03 11:52:22 -04'00'

Ruby Parks
Radiological Protection Manager
SRTE

Date

1. INTRODUCTION

This Operations and Maintenance (O&M) Plan is for the repair of a sinkhole located west of 232-H ECR 4 and south of 295-H.

This repair will require excavation within Site Index (SI) 549 (General Separations Area Eastern Groundwater Operable Unit, No Building Number (NBN)) and SI 591 (H-Area Process Sewer Lines as Abandoned, NBN) of the Federal Facility Agreement (FFA, Reference 1).

The soil excavation for these activities will not exceed 10 percent of the surface area, excluding structures, of the unit. The plan is characterized as a "minor intrusive activity" based on the soil excavation meeting the definition of both "minor" and "intrusive" as defined in Reference 2. Due to the size of SI 549 and 591 near where the excavation is located, it is not anticipated that this classification could change.

2. AREA DESCRIPTION AND CONDITIONS

The area in which the activity will be conducted is in the drainage basin of SRTE Industrial Wastewater Outfall H-02 (Attachment 3). The approximate location of the sink hole and SI 591 are shown on Attachment 2.

For a discussion of the SIs, see "Revision 0 for Appendix C for Fiscal Year 2021" of Reference 1. The location of the work is shown on the Map provided in Attachment 1. SI 549 and 591 are in the FFA because of possible radiological or chemical contamination from past releases from Site operations. To date there has been no remediation of these units, and the status of the units is inactive. Per Appendix E of Reference 1, Remedial Actions are scheduled to begin in May 2047 for SI 549 and April 2043 for 591.

3. O & M ACTIVITY

A. O&M Activity Description

The scope of the activity is to cut the asphalt to expose the repair area, then hand-excavate the sinkhole to gain access to the damaged vitrified piping. The piping will be repaired with Stainless Steel Smith-Blair 226 Single Band Full Circle Repair Clamps, and the hole will be backfilled. A six-inch to eight-inch layer of crush and run will be added up to ground grade.

Rad Protection sampled the soil and smeared the interior of the piping for removable contamination. Soil sample results were below Soil Contamination Area Posting Limits and Surface Contamination Values (Attachment 5 and Reference 5) found in Manual 5Q, Chapter 2.

A GPR survey for underground interferences and an Excavation Checklist (OSR 18-125) have been completed per Work Order 01892527-01 (Reference 4).

Work is expected to take one week.

THE DISPOSAL OF ANY CONTAMINATED SOIL WILL BE PER THE ENVIRONMENTAL COMPLIANCE AUTHORITY (ECA) AND RADIOLOGICAL PROTECTION (RP) DIRECTION. IT IS ANTICIPATED EXCAVATED SOIL WILL BE RETURNED TO ITS ORIGINAL LOCATION UPON TASK COMPLETION.

B. O&M Activity Sampling and Monitoring for Health and Safety

The identified units are in the FFA because of possible radiological contamination from past releases from Site operations.

Radiological surveys will be required at the excavation site within the buffer zone. If radiological contamination is encountered, Rad Protection will determine if protective equipment and/or personnel access restrictions are required.

The work area will be barricaded with rope or rigid handrail to ensure that access is controlled for personnel safety around the work area. Worker health and safety will be directed and controlled as required in the work package and Assisted Hazard Analysis.

C. Health and Safety Plan

The health and safety concerns involve worker exposure to unknown waste material that could be excavated. The work will be completed in accordance with the requirements stated in the AHA. The safety requirements and personal protective equipment described in the AHA are appropriate for the excavation work.

D. Characterization and Sampling Plan for the Affected Area within the Unit

Material removed as part of the excavation will be returned as backfill when the job is completed. If any unknown waste material is excavated as part of this repair, a Timeout will be taken and the Shift Operations Manager (SOM), Environmental Compliance Authority (ECA) and the Maintenance/Site Services Manager will be notified until the Timeout is resolved.

E. Contaminated Materials Management and/or Disposal

Based on previous excavations in the vicinity, radiological contamination is not expected in the excavated soil. All waste will be disposed in accordance with guidance from Rad Protection, the Generation Certification Official (GCO), and the ECA. Clean soil will be returned to the excavation once the work is complete.

F. Environmental Plans and Permit Modification Requests

There were no new permits identified.

Stormwater and sediment control shall be managed per SRS Manual 3Q Procedure 12.2.

4. CONTINGENCY PLAN

During implementation of the activity, if the conditions change at any time such that the activity is no longer considered "minor" (as defined in Reference 2) or any other unanticipated event occurs, the Project Manager, the Project Construction Manager, or the ECA shall:

- Immediately notify the SRNS-OSC. If necessary, the SRNS-OSC will notify the DOE-OSC.

- Stop work, secure the area, contain and stabilize the area, and determine any necessary change to the activity plan.

- Notify the SRNS-OSC of the findings and proposed path forward. The SRNS-OSC will communicate the information to the DOE-OSC and obtain concurrence on the path forward.

5. DOCUMENTATION & REPORTING

SRTE will transmit the following documentation to the SRNS-OSC within twenty days of the completion of the activity:

- The signed O&M plan

- Any sampling and characterization data collected

The following information is not expected to be generated by this activity, but, if generated, will be forwarded to the SRNS-OSC:

- The quantity (if any) of any contaminated materials generated, and

- The disposal location of any contaminated materials, if generated.

Attachments

Attachment 1. Drawing Showing Approximate Excavation Location of 232-H Sinkhole

Attachment 2. Map showing Site Index 591, H-Area Process Sewer Lines as Abandoned, NBN

Attachment 3. H-02 Outfall Drainage Map with Approximate Location of 232-H Sinkhole

Attachment 4. Map showing the Site Index 549, General Separations Area Eastern Groundwater Operable Unit

Attachment 5. Survey Number TRIT-I-20211028-3

References

1. SRNS-OS-94-42, Federal Facility Agreement for the Savannah River Site, Administrative Document Number 89-05-FF, effective August 16, 1993, Revision 0 of Appendix C and Revision 0 of Appendix E for Fiscal Year 2021.

2. WSRC-RP-96-45, *Savannah River Site Plan for Performing Maintenance in Federal Facility Agreement Area (O&M Plan) (U)*, December 15, 1996.

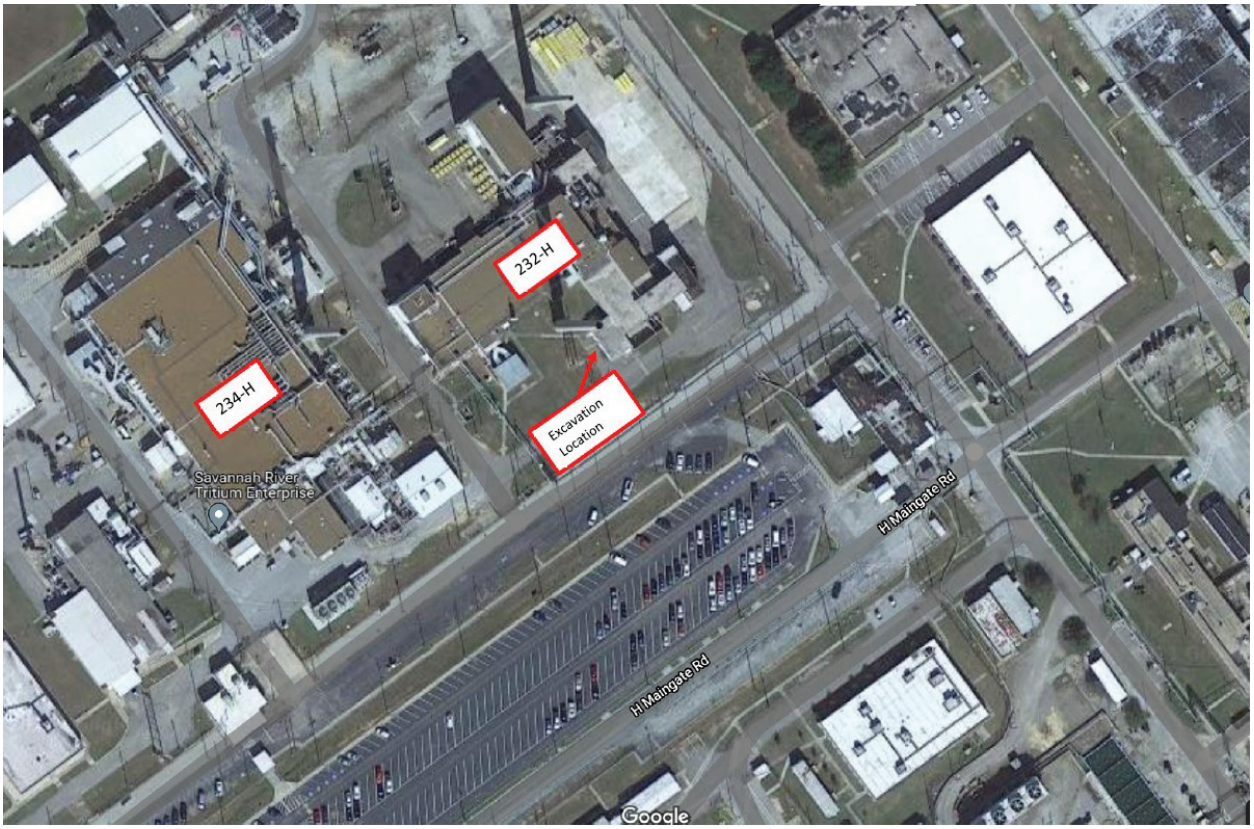
3. SRS Manual 8Q Procedure 34, Revision 11 "Excavations and Trenches"

4. Work Order No: 01892527-01 “WG TO EXCAVATE AND PRP WATER LINES AT SINK HOLE NEAR 232-H ECR#4”

5. Soil Sampling Survey No: TRIT-I-20211028-3

6. SRS Manual 5Q, Chapter 2, Revision 17 “Radiological Standards.”

Attachment 1. Drawing Showing Excavation Location of 232-H Sinkhole



Attachment 2. Map showing Site Index 591, H-Area Process Sewer Lines as Abandoned, NBN

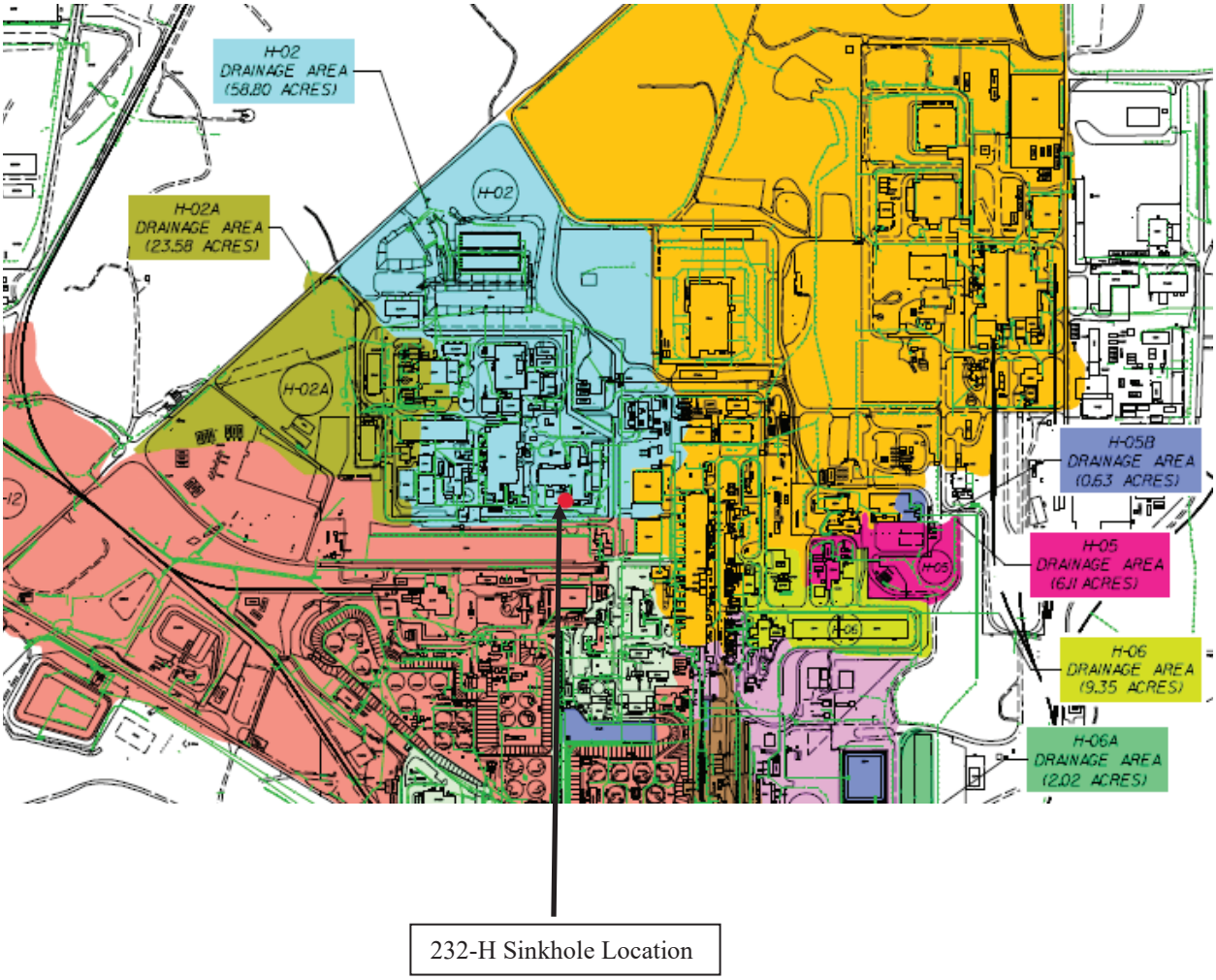


(2 of 2)

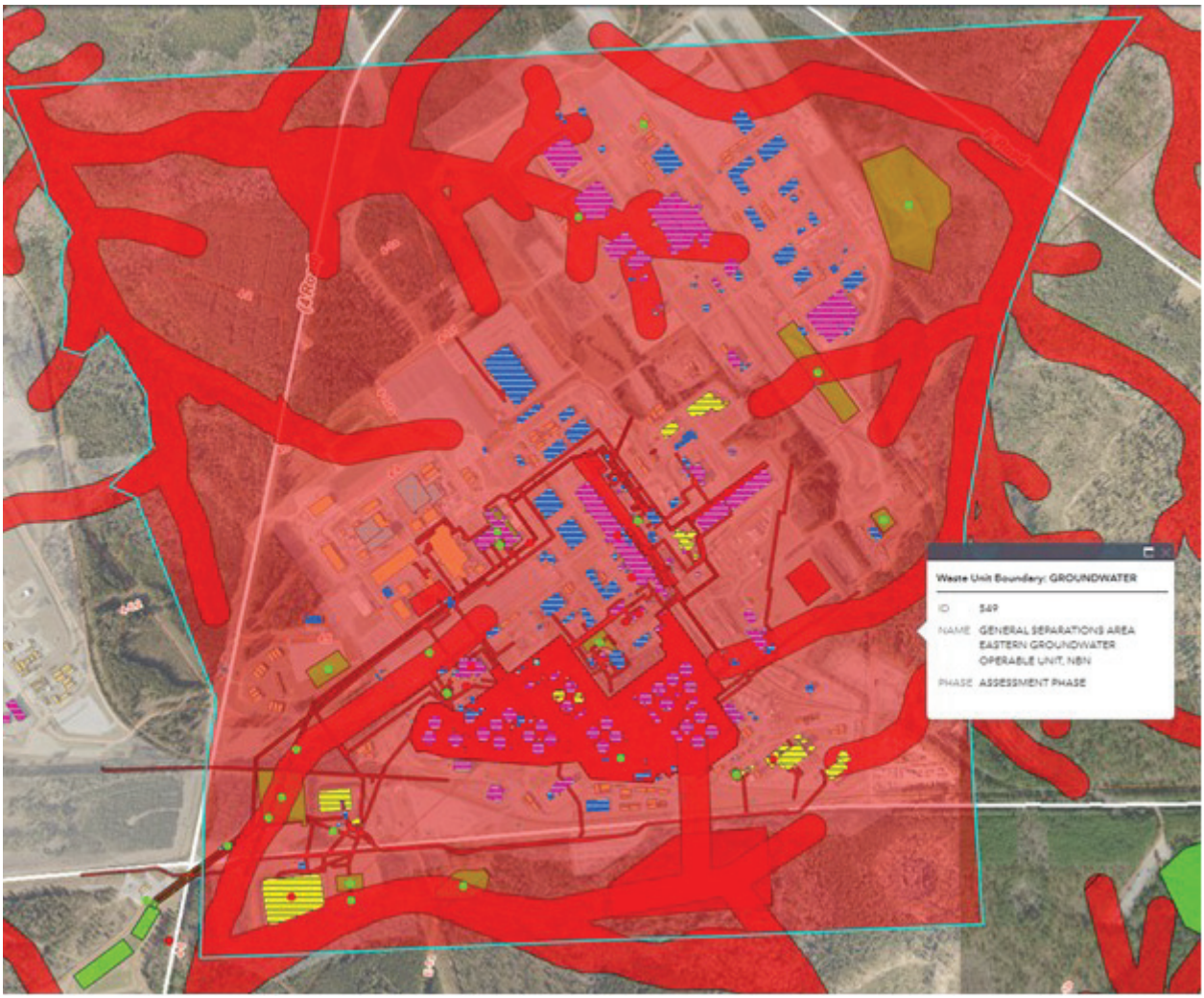
Waste Unit Boundary: MISC - PIPING, SUMPS

ID	591
NAME	H-AREA PROCESS SEWER LINES AS ABANDONED, NBN
PHASE	ASSESSMENT PHASE

Attachment 3. H-02 Outfall Drainage Map with Approximate Location of 232-H Sinkhole



Attachment 4. Map showing the Site Indices 549, General Separations Area Eastern Groundwater Operable Unit



Attachment 5. Survey Number TRIT-I-20211028-3

VSDS Itemized RSLS

Procedure 5Q1.2-133A RSM Track # 10025

Comments:

RPD provided a soil sample for Outside facilities construction to begin repairs on a sink hole located outside of 232-1H
Outside facilities operator used a extended tool and a scoop to gather soil to be surveyed. The extension tool and scoop were both surveyed
after gathering soil sample. Within the sinkhole was a drain pipe that was also surveyed for removable contamination. Sink hole area remains
barricaded with construction barricades for safety concerns.

Soil was dried on hot plate and surveyed following procedure 5Q1.2 303 (Analysis of soil samples)

Soil Sample Analysis worksheet attached to survey

Results of Soil samples:
Alpha- 52.95 pCi/gm
Beta- Gamma- 15.82pCi/gm
Tritium 1.60pCi/ml

Exterior of sample container:
ND dpm alpha probe, <20dpm/100cm2
ND dpm beta-gamma probe, <200dpm/100cm2
<1,000dpm/100cm2 Tritium, <1E-5uCi/cc

Results of smears in the drain pipe
<20 dpm/100cm2 alpha
<200dpm/100cm2 beta- Gamma
<1,000dpm/100cm2 H3